

CLAIMS

1. A method for communication between a switched-circuit network and at least two Voice over Internet Protocol network domains, each featuring packet-based signaling control, comprising:

transferring registration request messages from a gateway device, connected between the switched-circuit communication network and the Voice over Internet Protocol network domains, to a signaling controller in each of the Voice over Internet Protocol network domains, respectively; and

simultaneously registering the gateway device in the Voice over Internet Protocol network domains as a Voice over Internet Protocol termination point in response to the registration request messages.

2. A method as recited in claim 1, wherein the registration request messages are transferred in parallel to the signaling controller in each of the Voice over Internet Protocol network domains.

3. A method as recited in claim 2,
further comprising determining a network address of the signaling controller in each of the Voice over Internet Protocol network domains by broadcasting from the gateway device a request message into the Voice over Internet Protocol network domains, and
wherein said transferring transfers the registration request messages using the network address of the signaling controller in each of the Voice over Internet Protocol network domains.

4. A method as recited in claim 3, further comprising after said registering of the gateway device:

receiving, at the gateway device from the switched-circuit communication network, a circuit-oriented connection setup message with destination address information which identifies a communication destination;

transferring, from the gateway device to the signaling controller in each of the Voice over Internet Protocol network domains, an address resolution request message with the destination address information; and

transferring a packet-oriented connection setup message into the Voice over Internet Protocol network domains for which the signaling controller returns an address confirmation message indicating a successful address resolution of the destination address information.

5. A method as recited in claim 3, further comprising at the gateway device after said registering of the gateway device:

receiving from the switched-circuit communication network a circuit-oriented connection setup message with destination address information identifying the communication destination;

evaluating the destination address information; and

determining, based on the destination address information, a choice relating to further connection setup between the Voice over Internet Protocol network domains.

6. A gateway device for communication between a switched-circuit communication network and Voice over Internet Protocol network domains, each Voice over Internet Protocol network domain having a packet-based signaling controller, comprising:

interfaces coupled to the switched-circuit communication network and the Voice over Internet Protocol network domains; and

a registration device, coupled to said interfaces, to transfer a registration request message to the packet-based signaling controller in each of the Voice over Internet Protocol network domains for simultaneous registration of the gateway device in each of the Voice over Internet Protocol network domains as a Voice over Internet Protocol end point.

7. A gateway device as recited in claim 6, further comprising a polling unit for broadcasting an address resolution request message into the Voice over Internet Protocol network domains to determine a network address of the packet-based signaling controller in each of the Voice over Internet Protocol network domains to be used for transmission of the registration request message.

8. A gateway device as recited in claim 7, further comprising a connection controller to receive from the switched-circuit communication network a circuit-oriented connection setup message with destination address information identifying a communication destination, to transfer address resolution request messages including the destination address information to

the packet-based signaling controller in each of the Voice over Internet Protocol network domains, and to transfer a packet-oriented connection message into the Voice over Internet Protocol network domains for which the packet-based signaling controller returns an address confirmation message indicating a successful address resolution of the destination address information.

9. A gateway device as recited in claim 7, further comprising a connection controller to receive from the switched-circuit communication network a circuit-oriented connection setup message with destination address information identifying a communication destination, to evaluate the destination address information and to make a selection affecting further connection setup between the Voice over Internet Protocol network domains based on evaluation of the destination address information.

10. A communication system, comprising
a switched-circuit communication network;
Voice over Internet Protocol network domains, each Voice over Internet Protocol network domain having a packet-based signaling controller; and
a gateway device, including
interfaces coupled to said switched-circuit communication network and said Voice over Internet Protocol network domains; and
a registration device, coupled to said interfaces, to transfer a registration request message to the packet-based signaling controller in each of said Voice over Internet Protocol network domains for simultaneous registration of the gateway device in each of said Voice over Internet Protocol network domains as a Voice over Internet Protocol end point.

11. A communication system as recited in claim 10, wherein said gateway device further includes a polling unit for broadcasting an address resolution request message into said Voice over Internet Protocol network domains to determine a network address of the packet-based signaling controller in each of said Voice over Internet Protocol network domains to be used for transmission of the registration request message.

12. A communication system as recited in claim 11, wherein said gateway device further includes a connection controller to receive from said switched-circuit communication network a circuit-oriented connection setup message with destination address information identifying a

communication destination, to transfer address resolution request messages including the destination address information to the packet-based signaling controller in each of said Voice over Internet Protocol network domains, and to transfer a packet-oriented connection message into said Voice over Internet Protocol network domains for which the packet-based signaling controller returns an address confirmation message indicating a successful address resolution of the destination address information.

13. A communication system as recited in claim 11, wherein said gateway device further includes a connection controller to receive from said switched-circuit communication network a circuit-oriented connection setup message with destination address information identifying a communication destination, to evaluate the destination address information and to make a selection affecting further connection setup between said Voice over Internet Protocol network domains based on evaluation of the destination address information.